

Figure 1

Clone S1+27 protein sequence (SEQ ID No. 1)

1 KSSPLLIRMEESLNIVKYTAFLYNDQLIWSGLEQDDMRILYKYLTTSLFP 50  
51 RHIEPELAGRDSPIRAEMPGNLQHYGRFLTGPLNLNDPDAKCRFPKIFVN 100  
101 TDDTYEELHLIVYKAMSAAVCFMIDASVHPTLDFCRLDSIVGPQLTVLA 150  
151 SDICEQFNINKRMSGSEKEPQFKFIYFNHMNLAEKSTVHMRKTPSVSLTS 200  
201 VHPDLMKILGDINSDFTRVDEDEEIIVKAMSDYWVVGKKSDRRELYVILN 250  
251 QKNANLIEVNEVKKLCATQFNNIFFLD 277

Figure 2

Clone S1+28 protein sequence (SEQ ID No. 2)

1 FAVDAKALPQNKPRLTQEEIAQRERARQRHAEKLAQGQAPLEPTQD 50  
51 GSAIETCPKGDEPRGDEQQVESMTPKPVLQEENNQESFIAFARVFSGVAR 100  
101 RGKKIFVLGPKYSPLEFLRRVPLCFSAPPDGLPQVPHMAYCALENLYLLM 150  
151 GRELEYLEEVPVPGNVLGIGGLQDFVLKSATLCSLPSCPPFIPLNFEATPI 200  
201 VRVAVEPKHPSEMPQLVKGMKLLNQADPCVQILIQETGEHVLVTAGEVHL 250  
251 QRCLDDLKERFAKIHISVSEPIIPFRETITKPPVDMVNEEIGKQQKVAV 300  
301 IHQMKEQSKIPEGIQVDSDGLITITTPNKLATLSVRAMPLPEEVHQILE 350  
351 ENSDLIRSMEQLTSSLNEGENTHMIHQKTQEKIWEFKGKLEQHLTGRRWR 400  
401 NIVDQIWSFGPRKCGPNILVNKSEDFQNSVWTGPADKASKEASRYRDLGN 450  
451 SIVSGFQLATLSGPCEEPLMGVCFVLEKWDL SKFEEQGASDLAKEDRRK 500  
501 MKPVLVEMKTKSYKMAALRPLRRGHHRKENLHS LTAMDLSQDS 543

Figure 3

Clone S1+19 protein sequence (SEQ ID No. 3)

1 MKAVKSERERGSRRRHRDGDVVL PAGVVVKQERLSPEVAPPAHRRPDHSG 50  
51 GSPSPPTSEPARSGHGNRARGVSRSPKKKNASGRRSKSPRSKRNRSP 100  
101 HHSTVKVKQEREDHPRRGREDRQHREPSEQEHRRARNSDRDRHRGHSHQR 150  
151 RTSNERPGSGQGQGRDRDTQNLQAQEEREFFYNARRREHRQRNDVGGGGS 200  
201 ESQELVPRPGNNKEKEVPAKEKPSFELSGALLEDNTFRGVVIKYSEPP 250  
251 EARIPKKRWRLYPFKNDEVLPVMYIHRQSAYLLGRHRRRIADIPIDHPSCS 300  
301 KQHAVFQYRLVEYTRADGTGRRVKPYIIDLGSNGTFLNNKRIEPQRYY 350  
351 ELKEKDVLKFGFSSREYVLLHESSDTSEIDRKDDEEEEEEVSDS 396

Figure 4

Protein sequence of NIPP-1 domain (SEQ ID No. 4) homologous to SNIP 1.

1 YLFGRNPDLCDFTIDHQSCSRVHAALVYHKHLKRVFLIDLNSTHGTFLGH 50

51 IRLEPHKPQQIPIDSTVSFGASTRAYTLREKP 82

Figure 5

Clone S1+19 Smad binding domain protein sequence (SEQ ID No. 5)

1 RHRGHSHQRRTSNERPGSGQQGRDRDTQNLQAQEEEREFYNARRREHRQ 50  
51 RNDVGGGSSESQELVPRPGGNNEKEVPAKEKPSFELSGALLEDNTNFRG 100  
101 VVIKYSEPPEARIPKKRWRLYPFKNDELPVMYIHRQSAYLLGRHRIAD 150  
151 IPIIDHPSCSKQHAVFQYRLVEYTRADGTGRRVKPYIIDLGSGNGTFLNN 200  
201 KRIEPQRYYELKEKDVLKFGFSSREYVILLHESSDTSEIDRKDDEEEEE 250  
251 EVSDS 255

Figure 6

Clone S1+19 C. elegans homology protein sequence

(SEQ ID No. 6)

```
1 GALTEDTNTFRGVVIKYNEPPEAKKPNAWRWLYPFKGEESLQVLYIHRQS 50
51 AYLIGRDHKIADIPVDHPSCSKQHAVLQFRSMPFTRDDGKARRIMPYII 100
101 DLGSGNGTFLNEKKIEPQRYIELQEKDMLKFGFSTREYVVMKEREITEEE 150
151 LAEGEDVKKEESD 163
```

Figure 7

Clone S1+12 protein sequence (SEQ ID No. 7)

1 EFGTRRMMEGLDDGPDFLSEEDRGLKAINVDLQSDAALQVDISDALSERD 50  
51 KVKFTVHTKSSLPNFKQNEFSVVRQHEEFIWLHDSFVENEDYAGYIIPPA 100  
101 PPRPDFDASREKLQKLGEGEGSMTKEEFTKMKQELEAEYLAIFKKTVAMH 150  
151 EVFLCRVAAHPILRRDLNFHVLFLEYNQDLSVRGKKKKNSRSFGLLRQ 198

Figure 8

Clone S1+12-2 protein sequence (SEQ ID No.8)

1 HASGLGAAMMEGLDDGPDFLSEEDRGLKAINVDLQSDAALQVDISDALSE 50  
51 RDKVKFTVHTKSSLPNFKQNEFSVVRQHEEFIGLHDSFVENEDYAGYIIP 100  
101 PAPPRPFDASREKLQKLGEGEGSMTKEEFTKMKQELEAEYLAIFKKTVA 150  
151 MHEVFLCRVAAHPILRRLNHFHVLEYNQDLSVRGKNKKEKLEDFFKNMV 200  
201 KSADGVIVSGVKDVDDFFEHERTFLLEYHNRVKDASAKSDRMTRSHKSAA 250  
251 DDYNRIGSSLYALGTQDSTDICKFFLKVSSELFDKTRKIEARVSADEDLKL 300  
301 SDLLKYYLRESQAQAKDLLYRRSRSLVDYENANKALDKARAKNKDVLQAET 350  
351 SQQLCCQKFEKISESAKQELIDFKTRRVAAFTRKNLVELAELELKHAKGNL 400  
401 QLLQNCLAVLNGDT 414

Figure 9

Clone S1+12-5 protein sequence (SEQ ID No.9)

1 MTTLTEIKLLPSLVLLVCCEYLAIFFKKTVAAMHEVFLCRVAAHPILRRDLN 50  
51 FHVFLEYNQDLSVRGKNKKEKLEDFFKNMVKSADGVIVSGVKDVDDFFEH 100  
101 ERTFLLEYHNRVKDASAKSDRMTRSHKSAADDYNRIGSSLYALGTQDSTD 150  
151 ICKFFLKVSELDKTRKIEARVSADEDLKLSDLKYYLRESQAAKDLLYR 200  
201 RSRSLVDYENANKALDKARAKNNDVLQAETSQQLCCQKFEKISESAKQEL 250  
251 IDFKTRRVAAFRKNLVELAELELKHAKGNLQLLQNCLAVLNGDT 294

Figure 10

Clone S3+1 DNA sequence (SEQ ID No. 10)

1 ATGTCAAGTGGAATTGGCAGAGAGGC  
AAAGAAGAAGAAGGAGTTATGG 50  
51 TTTCTAATAGAACGATATCAGGAAGGAAGTGAATAGAGCTTCTAACTGA 100  
101 AATGCTGTGTTGCAAGAAAAATGGTGCTTCATTGGATGTGTTGCACCC 150  
151 CGATGTAAACGAAGTTATCATTCCCATGTGGACTTCAGAGAGAACATGTAT 200  
201 TTTCCAGTTACTGGCAATTTCGTCATTGTTGGGACCATGACCTG 250  
251 TTCAAATAATTACATCTAATAATTATAGAGAGTCCTTACCATGCACCATT 300  
301 TGCTTGGATTATTGAGCCTATTCCAAGTTATAACATATTACGAAGTCC 350  
351 TTGTTGTAAGAACGCTTGGTTCATAGAGACTGTTACAGGTTCAAGCAA 400  
401 TAAATGCGGGAGTGTGTTCTTAGGTGTACAATATGCAATAATAGTGAC 450  
451 ATCTTCAGAAAGAGATGTTGAGAATGGGAATTCACTATTCTGAAAAAGA 500  
501 TGCTTCCTGGATTAGAGGAAAACGCTTATCAAGAGCTTCTGCAGCACT 550  
551 ATGAGCGTTGTATGTTGAAAGATGTCGTTGCAAAGAAGGGCGAGACTAT 600  
601 AATGCACCTGATAGCAAATGGAAATAAAGCGCTGTCAGTGTGTTGTC 650  
651 CAGTGGCACACATTAGCCTGCTCCTCATTACGGTCATGGAGCAAAATT 700  
701 GGGAGTGTGGAATGTAGGGTATTATCTACAATTAGGAGAGTTCAA 750  
751 ACAGCCAAAAAACATGTATTACCAATTCTAATAATGTGGGATTACAGA 800  
801 TTGTTGTTGGAAGAGTCATCACCTAAATTACCCAGACAGTCACCTGGAT 850  
851 CCCAGAGTAAAGATCTACTGAGGCAAGGCAGCAAATTAGAAGAAATGTA 900  
901 TCAACACTATTAATAGAGTTAGGATTCAAATTAAAAAAAAAAAAAAA 950  
951 ACTCGAGAAGNTGGANTNTCGCCAGAGGTTGGTCAA 989

Figure 11  
Clone S3+1 protein sequence (SEQ ID No. 11)

1 MSSGIWQRGKEEEGVYGFIEDIRKEVNRA SKLKCCVCKNGASIGCVAP 50  
51 RCKRSYHFPCGLQRECIFQFTGNFASF CWDHRPVQIITSNNYRESLPCTI 100  
101 CLEFIEPIPSYNILRSPCCKNAWFHRDCLQVQAINAGVFFFRC TICNNSD 150  
151 IFQKEMLRMGIHIPEKDASWELEENAYQELLQHYERCDVRRCRCKEGRDY 200  
201 NAPDSKWEIKRCQCCGSSGTHLACSSLRSWEQNWECLECRGIIYNSGEFQ 250  
251 TAKKHVLPNSNNVGITDCLL ESSPKLPRQSPGSQSKDLLRQGSKFRRNV 300  
301 STLLIELGFQIKKKKKLEKXGX FARGLV 329

Figure 12

Clone S3+12 DNA sequence (SEQ ID No. 12)

1 AGGAAAGCTACAGAAATTAGCACTGCAGTGGTCAGAGGTAGCTACCAT 50  
51 TGGCAGTTCTCCAGTTCTATAGCCAGTCAGCTATAGCTACAGGTCAACC 100  
101 AGGCAGCAGGGATTGGAAACCAGGCAACAGGAATTGGACATCAGACAATA 150  
151 CCAGTTAGCCTCCAGCAGCAGGAATGGGTATCAGGCCAGAGGAATGAG 200  
201 CCTGCAGTCAAATTACCTTGGACTAGCGGCAGCACCTGCAATTATGAGTT 250  
251 ATGCAGAATGTTCTGTCCCAATTGGAGTGACTGCTCCCTCATTCAGCCA 300  
301 GTTCAGGCCCGAGGTGCTGTGCCTACCGCTACCATTATAGAACCAACCACC 350  
351 ACCACCTCCTCCTCCTCCTCCACCACCAGCTCCAAAATGCCAC 400  
401 CACCTGAAAAGACAAAAAAAGGAAGGAAAGACAAGGCAAAGAAGAGTAAG 450  
451 ACCAAAATGCCATCTTGGTAAAAAGTGGCAGAGTATCCAGCGTGAGTT 500  
501 AGATGAAGAGGACAATTCTAGTTCCAGTGAAGAGGATCGGAAATCAACTG 550  
551 CACAGAAGCGAATTGAAGAGTGGAAACAGCAGCAGCTGGTAGTGGCATG 600  
601 GCAGAGAGAAATGCTAATTTGAAGCCCTCCTGAGGATTGGAGAGCAAG 650  
651 GCTGAAGAGAAGGAAAATGGCTCCAAACACATAGTTTAAGTTTAAA 700  
701 ACTTTTTGTATTATTGTTGTTGTTCAGTTCAAAGTCTTAACCAG 750  
751 TTTTATTGTCAAATAAACTATAATGTTATGGGGGAGATCTTATAAATT 800  
801 CCTGGGCAAGAGTGTATGCATACAAAGTTCACTTTGTGAAATGTAAT 850  
851 TTTTCTGTTTGCAAAGGGATGAGGTGATTGGAATTGCTTGACCATGC 900  
901 TGCCTTATTCTCAAACCTGGCAAACCTAGCATGTTAGGTGTATTAACCTC 950  
951 ATCAGTCTGAAGAACATGTGGCTCATGAGTATAACACTTCTGTAGAGGA 1000  
1001 CTCCCTGACAAAAGTGAAGAATTAACTTCTCCTCCAGAACAAAGTGCATT 1050  
1051 CAGAAGGCAGCTCTGCATTCTACCTTGCTTGACTGGAATTGTCTGAAGCT 1100  
1101 TTTTCTGGCCTCTTCTCTAGTCGGCCACCCCTGAAGTGTGAGGTCTA 1150  
1151 AGTGGTTACCTCGTGTGATAGATGCCACACTCTTAGAGTAGTTCTC 1200  
1201 ATAAGTTCTAGAACTGGTAGCTCGGTGTTGCACACTAGGGCATAAC 1250  
1251 AGGCAGCAGCAGGTGTTCATATCCTGATTTGAGAATTCCCTCAAGT 1300  
1301 ATGTGGCAGTAAATACAACAAGACACTCTATGTATTAATGTCTCCATTGT 1350  
1351 CTTAACCCCTGTTCCAAAACAAAATTCACCTCCTTCTTATGTGAATGTA 1400  
1401 TTCTCCATAAAATTCCAGTATTTAAAAAGCAGTTACTGTTCTGTACTTT 1450  
1451 CTGTTGTATCACAATCAGGTAAAAGTCACCTTAAACTGAGGAAACGGCAA 1500  
1501 ATTGTGTTTAAAGCTTTGTATTTCTCCAGTTCTGACCTTGTAAATT 1550  
1551 TGTATATATGCACTAATAAAGCTTTTTATAATCCTGAAAAAAAAAAA 1600  
1601 AAAAAAAAAAAACTCGAGAAGCTTGGACTTCTCGCCAGAGGTTGG 1650  
1651 TCAAGTCTCCAATCAAGGTTGTC 1673

Figure 13

Clone S3+12 protein sequence (SEQ ID No. 13)

1 EFGTRRKATEISTAVVQRSATIGSSPVLYSQSAIATGHQAAGIGNQATG 50  
51 IGHQTIPVSLPAAGMGHQARGMSLQSNYLGLAAAPAIMSYAECSVPIGVT 100  
101 APSSLQPVQARGAVPTATIIIEPPPPPPPPPPPPAPKMPPEKKGRKD 150  
151 KAKKSKTKMPSLVKKWQSIQRELDEEDNSSSEEDRESTAQKRIEYWQQ 200  
201 QLVSGMAERNANFEALPEDWRARLKRRKMAPNT 233

Figure 14

Clone S3+103 DNA sequence (SEQ ID No. 14)

1 GAATTGGCACGAGGCAGTCATTGAGCTGCGACCCTGTTCAACGCC 50  
51 GTTGGGCAAGCCAGCTGCTGGAGGTGCCGAGAATCTGAGTTGGCAAGC 100  
101 AGCCAGGTCTGGAAACTAATATTTAAAAATGACTACACCAAACAAGACA 150  
151 CCTCCTGGTGCTGACCCAAGCAGTTGGAAAGGACTGGAACAGTACGGGA 200  
201 AATTGGGTACAAGCTGTTGGTCACTCTCATCTTGCACCAACCAGGATTG 250  
251 GAGTGGATCAGTTACGAGATGACAATCTAGAAACTTATTGGCAATCAGAT 300  
301 GGTTCCCAGCCTCATTAGTGAACATCCAATTAGAAGAAAAACAAACAGT 350  
351 GAAGACATTATGTATTTATGCAGACTACAAATCTGATGAAAGCTATACTC 400  
401 CAAGCAAGATCTCAGTCAGAGTAGGAAATAATTTCACAACCTTCAAGAA 450  
451 ATTGGCAACTTGAGTTGGGAACCAAGTGGCTGGATTCATGTTCCCTT 500  
501 AACTGACAATCATAAGAAGCCAACTCGTACATTGATACAGATTGCTG 550  
551 TTCTAGCCAATCACCAGAATGGAAGAGACACCCATATGAGACAAATTAAA 600  
601 ATATACACACCAGTAGAAGAGAGCTCCATTGGTAAATTCCTAGATGTAC 650  
651 AACTATAGATTCATGATGTATCGTTCAATAAGGTGACTTTAAAATGAGA 700  
701 CGAAAATCATTAAACGTATCTTGGTCTTATCCTGTATTTAAATAATATA 750  
751 TCATGTACCTTATTGAACAAGGCATCCGTTATCTAATTGTATATG 800  
801 TTTAAAAATATTTATTGTAACTTGACAAATAATTGGGGTCATATTA 850  
851 TCTTTATTTCTTAACATGTAATAAGCTCACATATTTACATTAAAAA 900  
901 AAAAAAAAAAAAAAAACTCGAGAAG 926

Figure 15

Clone S3+103 protein sequence (SEQ ID No. 15)

1 EFGTRRTSLSLCDPCSTPLGKPAAGGAENLSFGKQPGLETNILKMTTPNKT 50  
51 PPGADPKQLERTGTVREIGSQAVWSLSSCKPGFGVDQLRDDNLETYWQSD 100  
101 GSQPHLVNIQFRRKTTVKTLCIYADYKSDESYTPSKISVRVGNNFHNLQE 150  
151 IRQLELVEPSGWIHVPLTDNHKKPTRTFMIQIAVLANHQNGRDTHMRQIK 200  
201 IYTPVEESSIGKFPRCTTIDFMMYRSIR\*L\*NETKIIKRIFVLILYLNNI 250  
251 SCTFIEQGIRYI\*FCICLKIFYCNFDK\*IWGHIIFIFFNM\*\*SSHILH\*K 300  
301 KKKKKNSR 308

Figure 16

Clone S3+125 DNA sequence (SEQ ID No. 16)

1 CAGGAATCTGTCCGAAGATAATTGAGGCAGAAGAGTCCAGAATGGGCCTC 50  
51 ATCATCGTCAATGCCTGGTACGGGAACTTGTCAATGACAAGAGCAGGAA 100  
101 GAGCGAGAAGGTGAAGGTGATTGACGTGACTGTGCCCTGCAGTGCCTGGG 150  
151 TAAGGACTCGAACGCTCATCCTCACGAGGCCTCCAAGCTGGCTGCCTGGC 200  
201 TTTTATGACCCGTGTGGGGAAAGAGAAGAACCTGAAAGTGCTCTATCA 250  
251 GTTCCGGGGCGTCCTGCATCAGGTGATGGTGCTGGACAGTGAGGCCCTCC 300  
301 GGATACCAAAGCAGTCCCACAGGATCGATAACAGATGGATAAACTGCCAAG 350  
351 AACCAAGATTTAAAAGGCCGAAAAAATTTTCCCTGGAGTCTACAAA 400  
401 TTTGGAAATGAAAAAACCCAGACATCAGATGTTTATTTATATTATTA 450  
451 TTATAGAAGGTGGTACCATTATCAATTATGTGAAGGGACATGCAGACACC 500  
501 CCAGCACTGGTATCTGAGTAACGGCTAACGAAACCTCCTCCTGGTTTG 550  
551 AAAAGCAGTTGGGTTGTCCAATTCTGTAACATTCTCCATTAA 600  
601 AAAGGTTCTCTGACGGCCCCACGGCCCGAGCCGCGGTGAGCGTCGTGTT 650  
651 GCATGAGCCTGGCCCCGGCTTCCGTGCGCCTCTGCCGCAGGTGCTTC 700  
701 TGGGCACCCATCCTCTGCCTTCATTGCAGTCGACTGTACAGAAGGCAC 750  
751 TCACCACAATAAACCTTCTGAAAGCAAAAAAAAAAAACTCG 800  
801 AGAAGGTTGGACTTGTGCCAGAGGTTGGTCAAGTNTCCAA 844

Figure 17

Clone S3+125 protein sequence (SEQ ID No. 17)

1 IRHEAAGICPKIIAEESRMGLIIVNAWYGNFVNDKSRKSEKVKVIDVTV 50  
51 PCSAWVRTRSSSRGLQAGLPGFYDPCVGEEKNLKVLYQFRGVLHQVMVL 100  
101 DSEALRIPKQSHRIDTDG 118

Figure 18

Clone S1+30 DNA sequence (SEQ ID No. 18)

1 GAATTCGGCACGAGGC GGACAAAGGG AATCAAAGTTGTGGGAAAATGGAA 50  
51 GGAAGTGAAGATTGACCCAAATATGTTGCAGATGGACAGATGGATGACT 100  
101 TGGTGTGCTTGAGGAATTGACAGATTACCAGTTGGTCTCCCTGCCAAG 150  
151 AATTCCCTCCAGCTCTCTCAAAGGAAGCACCCAAGAGAAAGGCACAA 200  
201 GCTGTTTCAGAAGAAG 216

Figure 19

Clone S1+30 protein sequence (SEQ ID No. 19)

1 EFGTRRTKGIKVVGKWKEVKIDPNMFADGQMDDLVCFEELTDYQLVSPAK 50

51 NSLQLSSQRKHPRERHKLFQKK 72

Figure 20

Clone S3+14 5' DNA sequence (SEQ ID No. 20)

1 CGATTCTAGCGTATATGGAGGATCGCAGAAACAGAAGTGGCAAAGATG 50  
51 TAAAAAAAATAATAAGGCAGAATTGAACTGTTGGGAATGGAACCAGTAC 100  
101 AGACAGCTAACTCTAGAAATGGGAAAAAGGGTCATCACACTGAAACGGTG 150  
151 TTCAACC GGTTTGC CAGGGC CTATTGC ACCAGAGAGCAGCAAGAAGCG 200  
201 GCCCGTAGATGCGACCAGACCTTCTAAGATGATGCCCTCATGCAGGTG 250  
251 GAAGCATCGGT 261

Figure 21

Clone S3+14 3' DNA sequence (SEQ ID No. 21)

1 AGAGGCCCTCATGCAGGGTGGAAGCACTGGGTCTCTATCTCTGCATAACA 50  
51 CGTTCCAACACAGCAGTAGTGGCCTACAGTCGTGTCATCTTGCGTCAC 100  
101 AGCAGTGCCACTTCTGCATCTTGCGCTTTATGCCATTGTGATGGGTGG 150  
151 TGCACCACATCCCCTCATGTAGACTCCAGCACCATGCTTCATCACCACC 200  
201 ACCACCACCCCCACCCCCACCATCACCAACCACCATCCAGGCTTGAGA 250  
251 GCCCCTGGCTACCCCTCTTACCCAGTGAACCGCCTCTGGTACTACCTT 300  
301 GCGGTTGCCACCACTGCAACCTGAGGAGGATGACGATGAGGATGAAGAAG 350  
351 ATGATGATGACTTATCTCAGGGCTATGATAGCTCAGAAAGGGACTTCTCA 400  
401 CTCATTGATGATCCTATGATGCCAGCTAACTCAGACTCCAGTGAAGATGC 450  
451 TGATGACTGAAGCCCCAGCATGGGCCCTTGACTATGGAAACGTGGGAGGGCAGG 500  
501 TTTCATTACTCTGCCCTTGGACTATGGAAACGTGGGAGGGCAGG 547

Figure 22

Clone S3+14 protein sequence (SEQ ID No. 22)

1 EALMQGGSTGSLSLHNTFQHSSSGLQSVSSLGHSSATSASLPFMPFVMGG 50  
51 APSSPHVDSSTMLHHHHHHPHPHHHHHHPGLRAPGYPSSPVTTASGTTL 100  
101 RLPPLQPEEDDDDEEEDDDDLSQGYDSSERDFSLIDDPMMMPANSDSSEDA 150  
151 DD 152

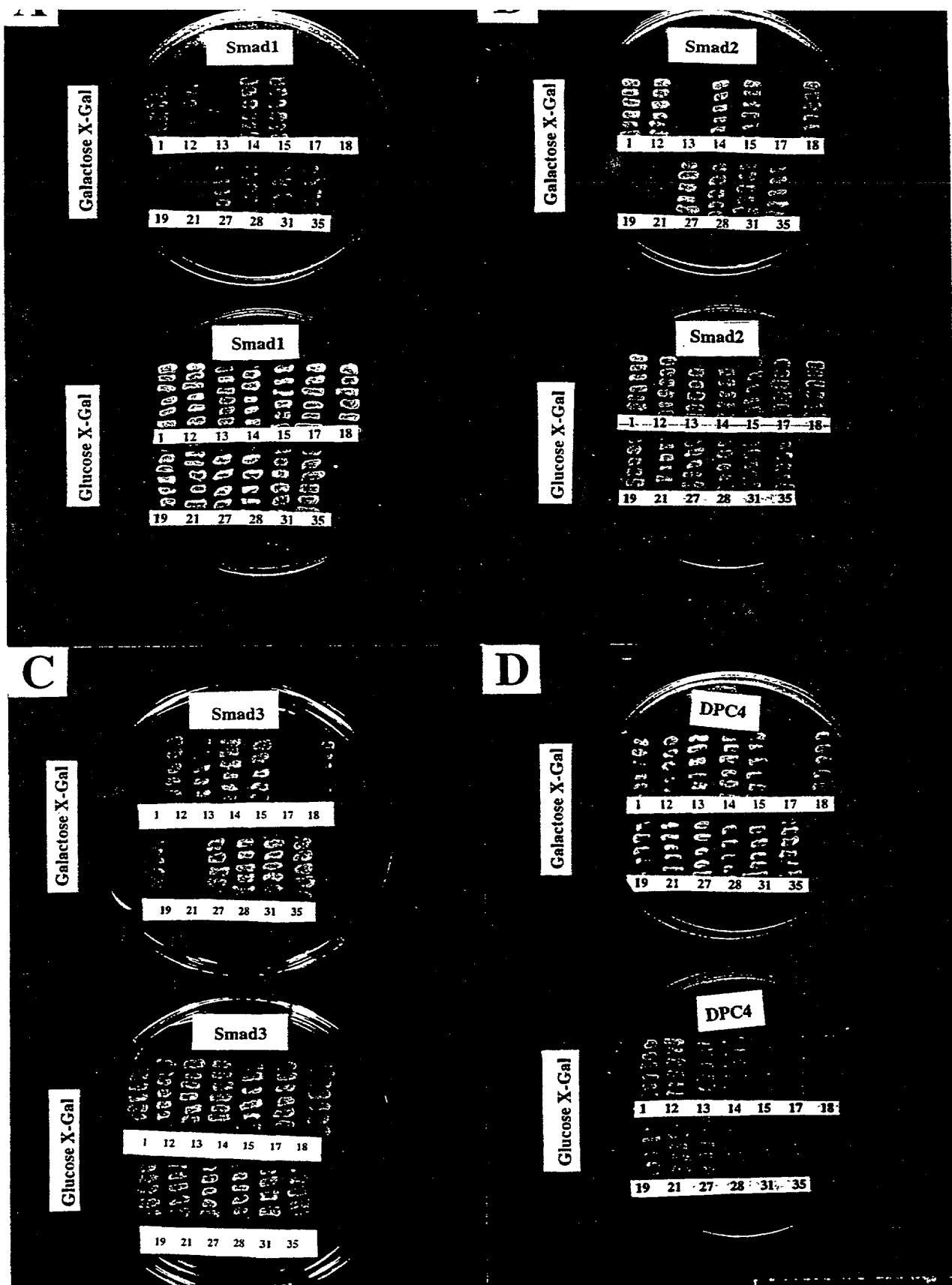


FIGURE 23

FIGURE 24

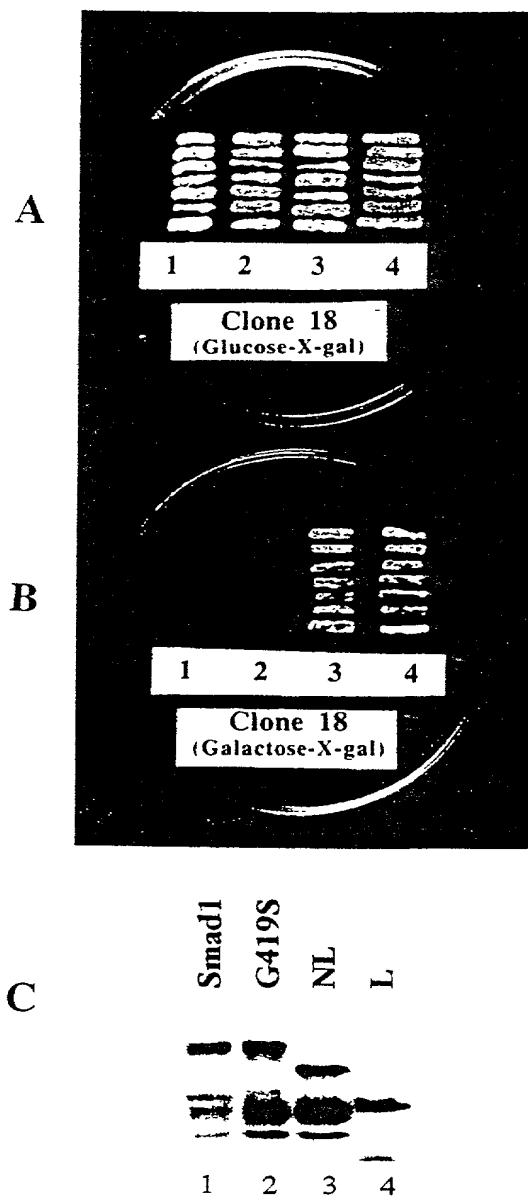


FIGURE 25

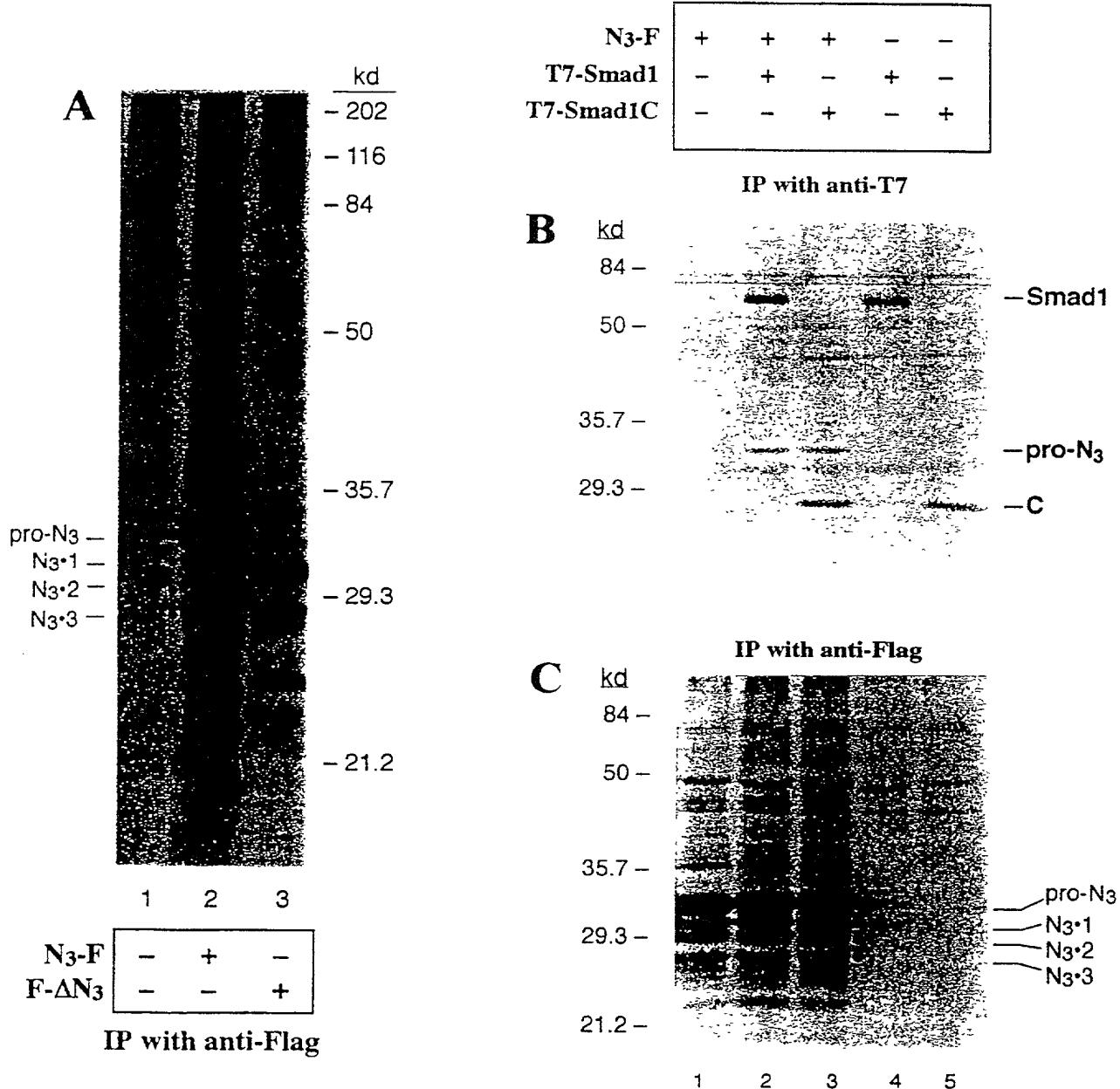


FIGURE 26

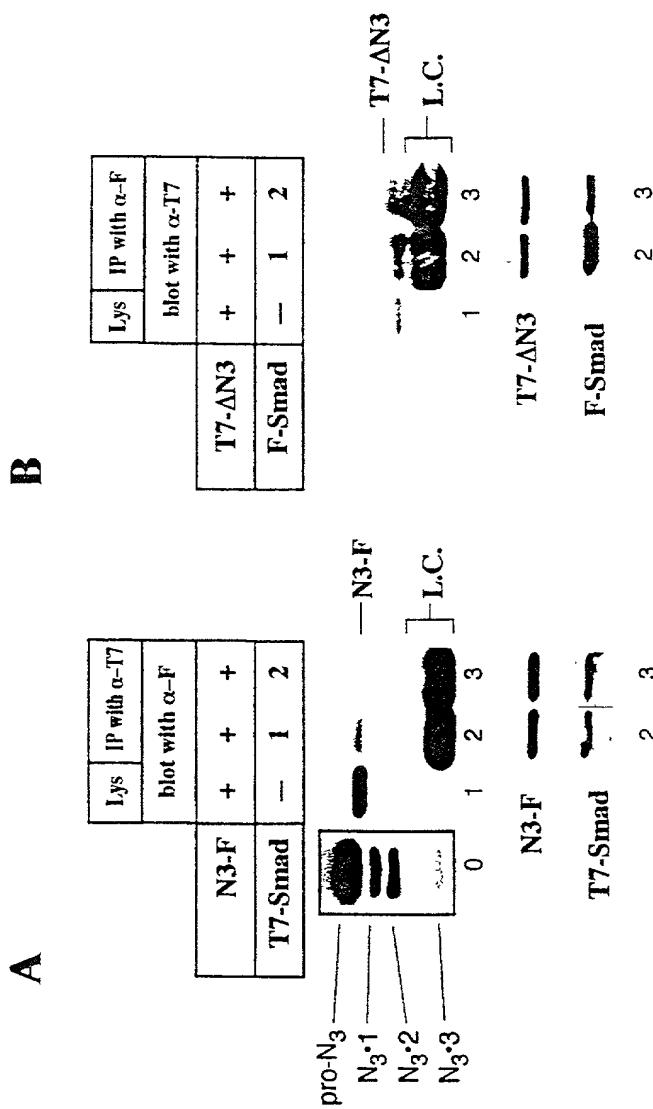
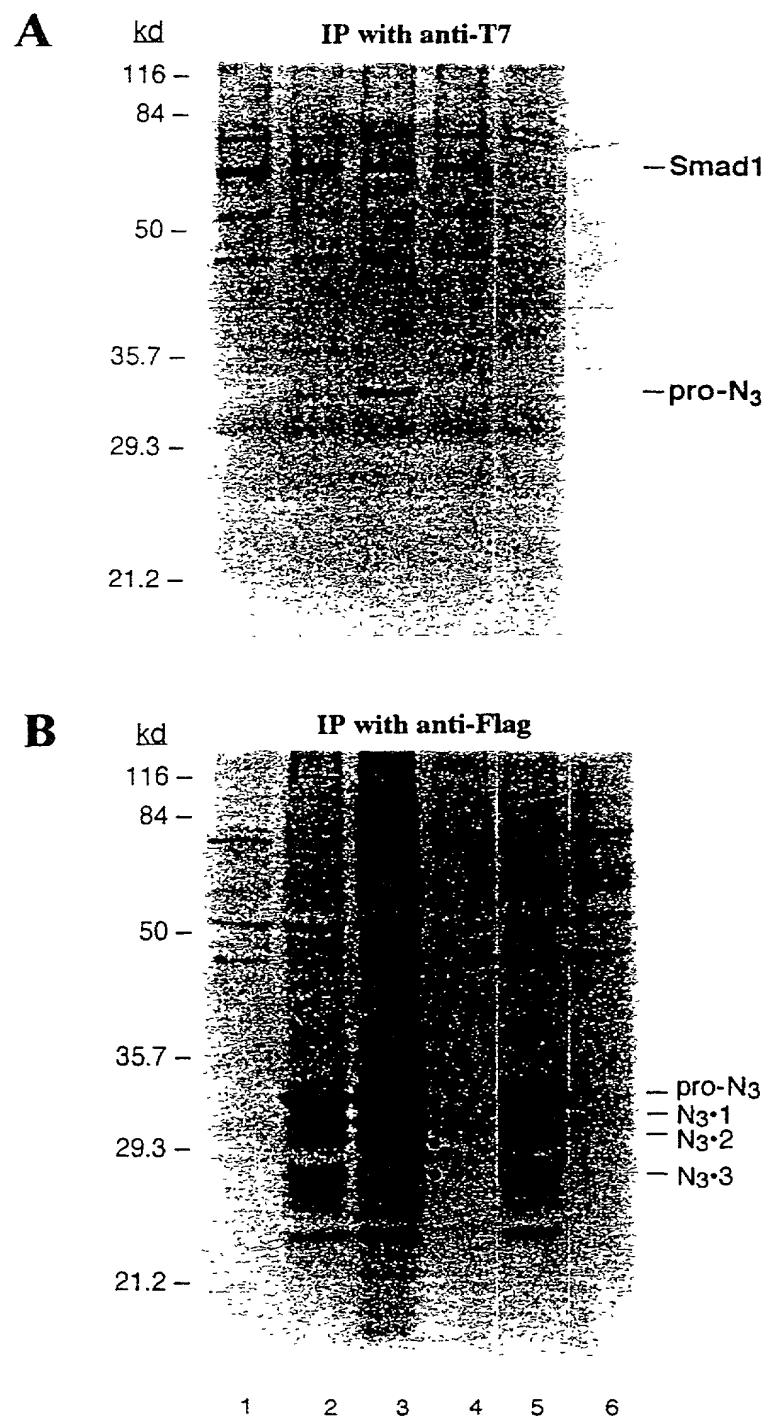


FIGURE 27

N3-F	-	+	+	-	+	-
T7-Smad1	+	+	+	+	-	-
HA-ALK3QD	-	-	+	+	+	+



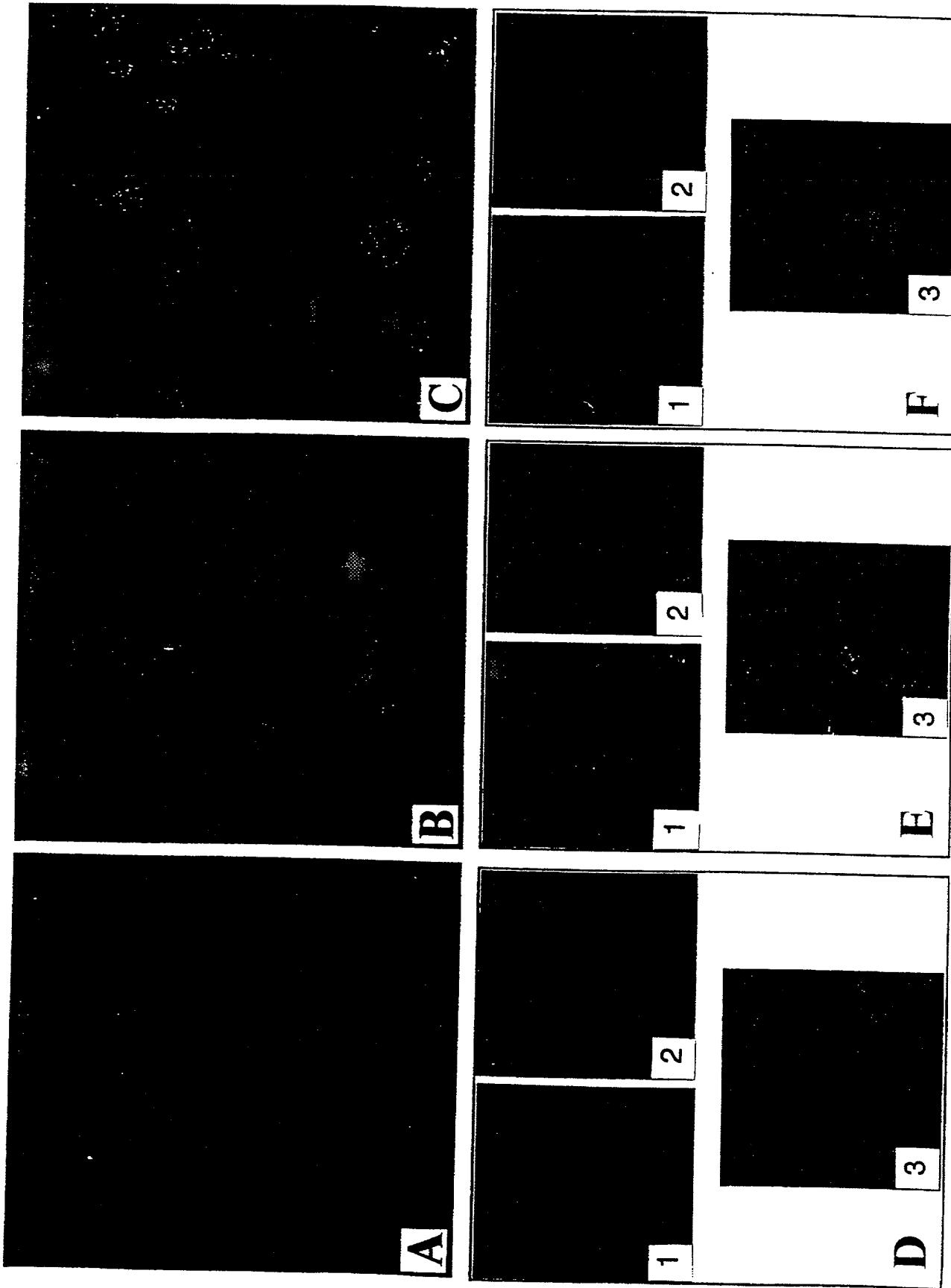
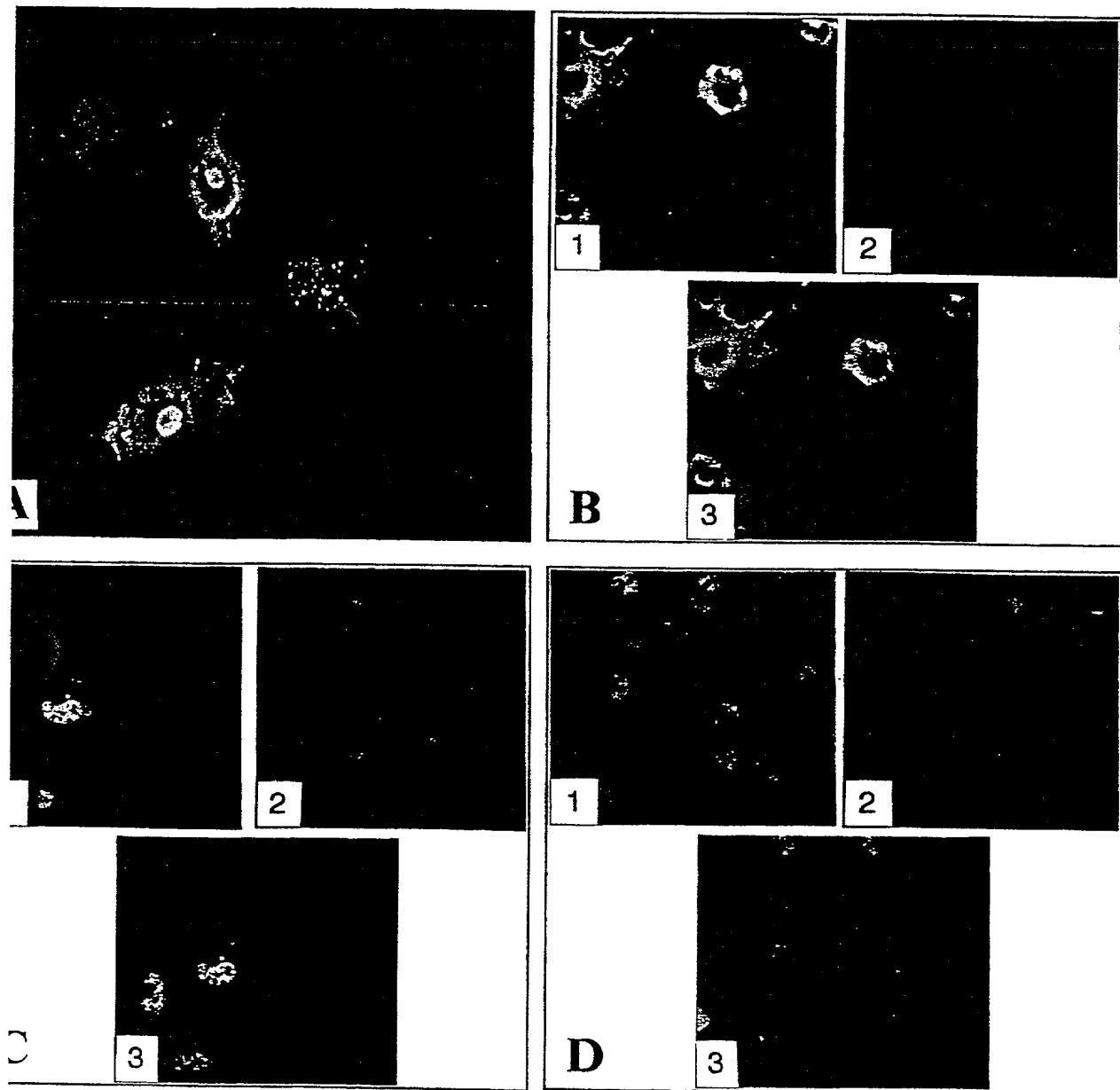


FIGURE 29



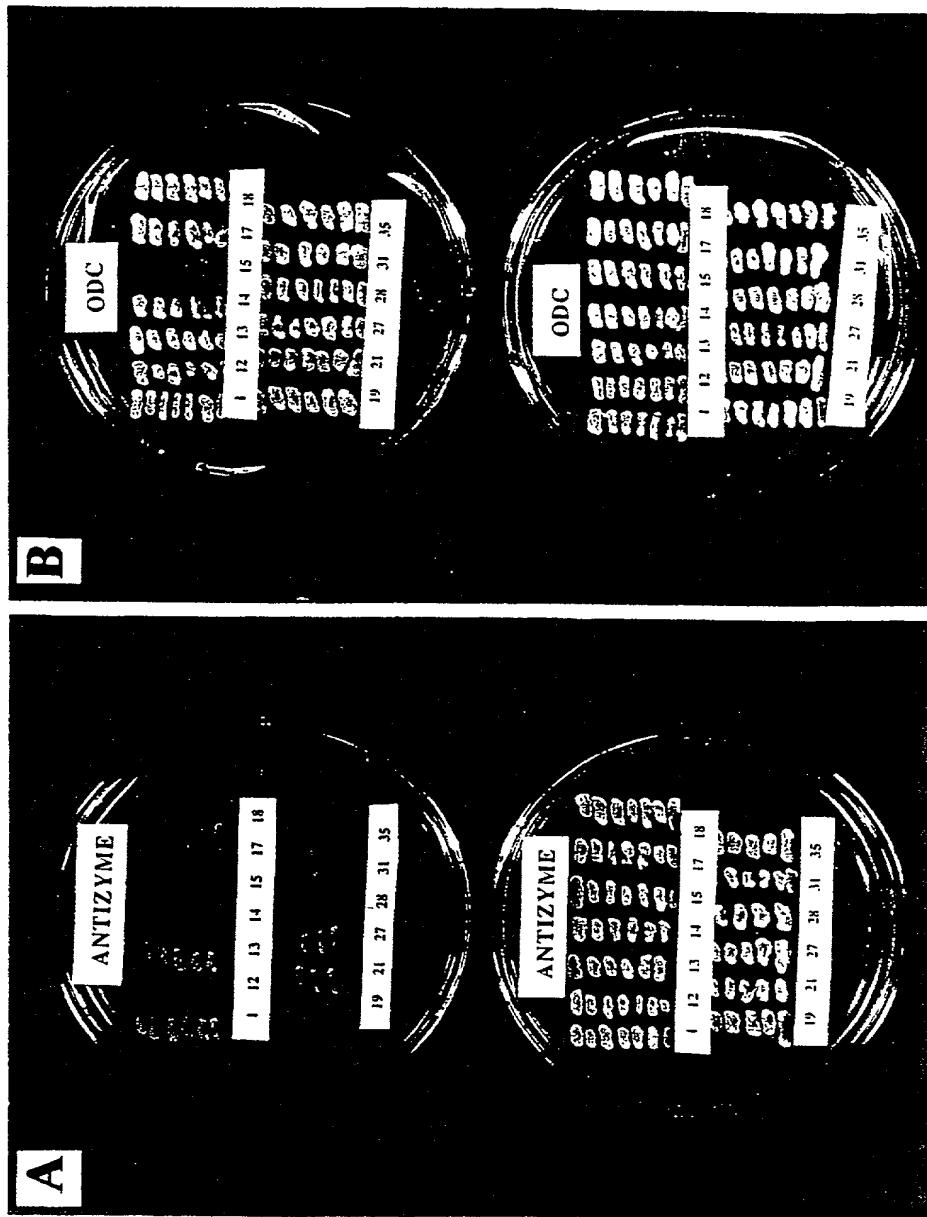


FIGURE 30

### FIGURE 31

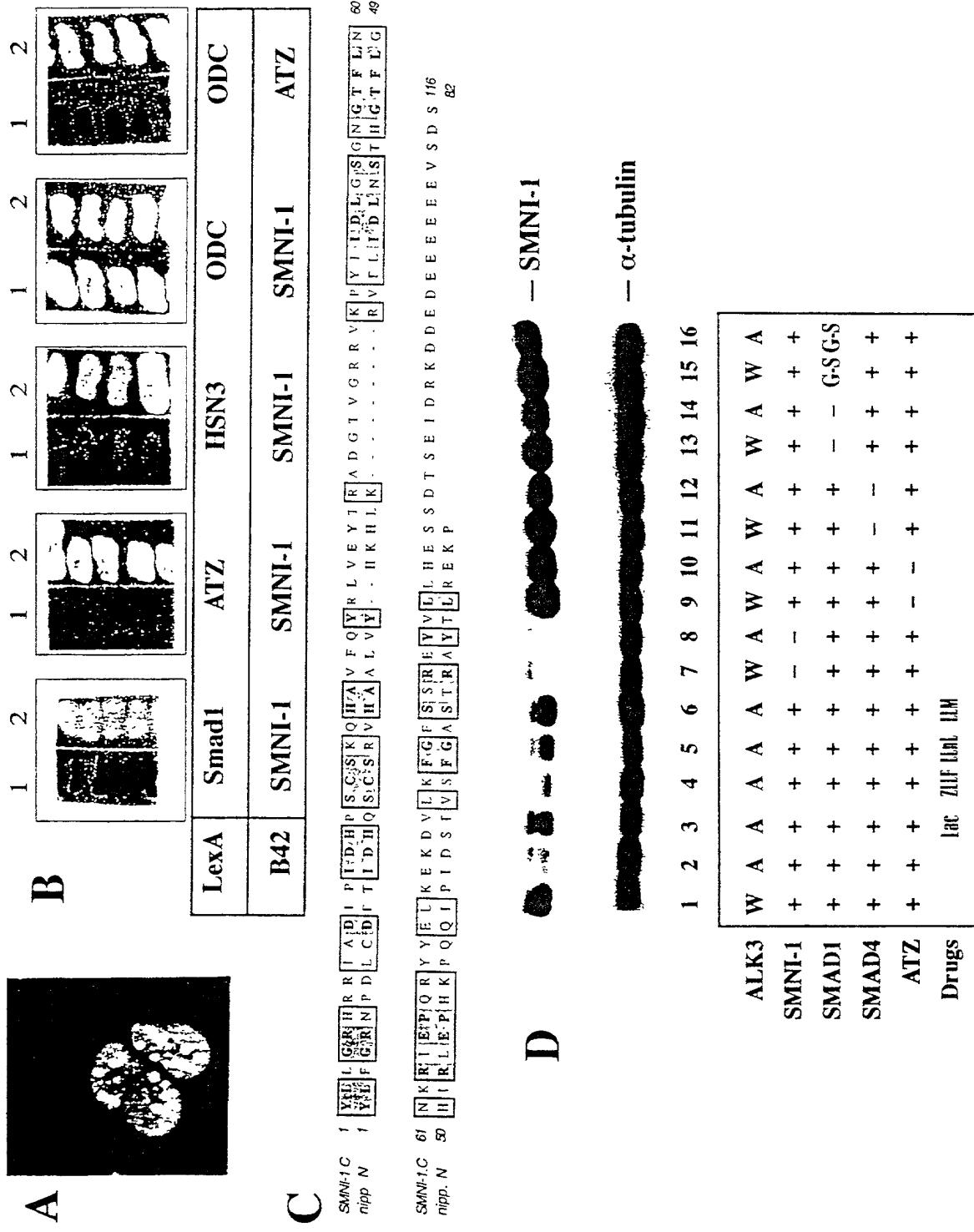


FIGURE 32

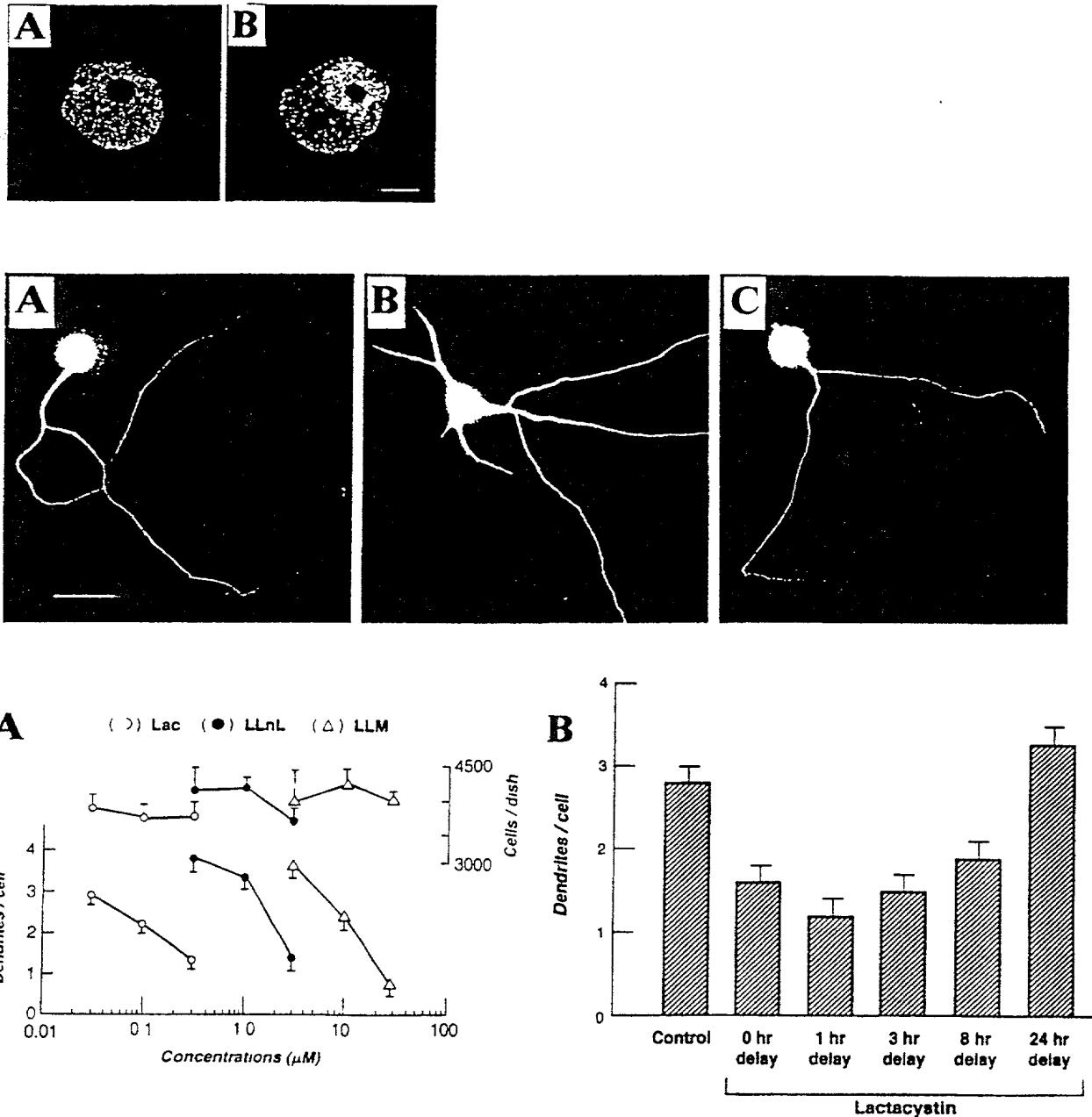


Figure 33

Clone S1+19 cDNA sequence (SEQ ID No. 23)

1 GAGGAGCTCAACTGATCTGTTTCTTCGCCAGCCAAAATCACAGAATG 50  
51 AAGGCGGTGAAGAGCGAACGGGAGCGAGGGAGCCGGCGAAGACACCAGGA 100  
101 CGGGGACGTGGTCTGCCGGCGGGGTGGTGGTGAAGCAGGAGCGTCTCA 150  
151 GCCCAGAAGTCGCACCTCCGCCACCGCCGTCCGGACCCTCCGGTGGT 200  
201 AGCCCCTCTCCGCCGACCAGCGAGCCGGCCGCTCGGGCCACCGCGGGAA 250  
251 CCGAGCCCGAGGAGTTAGCCGGTCCCCACCCAAAAAGAAAAACAAGGCCT 300  
301 CAGGGAGAAGAAGCAAGTCTCCTCGCAGTAAGAGAAACCGAAGTCCTCAC 350  
351 CACTAACACAGTCAAAGTGAAGCAGGAGCGTGAGGATCATCCCCGGAGAGG 400  
401 ACAGGGAGGATCGGCAGCACAGGGAACCATCAGAACAGGAACACAGGAGAG 450  
451 CTAGGAACAGTGACCGGGACAGACACCGGGGCCATTCCCACCAAAGGAGA 500  
501 ACGTCTAACGAGAGGGCTGGGAGTGGGAGGGTCAGGGACGGGATCGAGA 550  
551 CACTCAGAACCTGCAGGCTCAGGAAGAAGAGCGGGAGTTTATAATGCCA 600  
601 GGCGACGGGAGCATGCCAGAGGAATGACGTTGGTGGCGGCAGTGAG 650  
651 TCTCAGGAGTTGGTCTCGGCCTGGTGGCAACAACAAAGAAAAAGAGGT 700  
701 GCCCGCTAAAGAAAAACCAAGCTTGAACCTTCTGGGGCACTTCTGAGG 750  
751 ACACCAACACTTCCGGGTGTAGTCATTAAATATAAGTGAGCCCCAGAA 800  
801 GCACGTATCCCCAAAAAACGGTGGCGTCTCACCCATTAAAAATGATGA 850  
851 GGTGCTTCCAGTCATGTACATACATCGACAGAGTGCCTACACTGGGTC 900  
901 GACACCGCCGCATTGCAGACATTCCAATTGATCACCCGTCTGTTCAAAG 950  
951 CAGCATGCGGTCTTCAATATCGGCTTGTGGAATATACCCGTGCTGATGG 1000

1001 CACAGTTGCCGAAGAGTGAAGCCCTACATCATTGACCTTGGCTCAGGCA 1050  
1051 ATGGAACCTTCTTAAACAACAAACGTATTGAGCCACAGAGATACTATGAA 1100  
1101 CTAAAAGAAAAGGATGTACTCAAATTGGATTCACTAGCAGAGAATACGT 1150  
1151 CTTGCTCCATGAGTCGTCGGACACTCTGAAATAGACAGGAAAGATGACG 1200  
1201 AGGATGAGGAGGAGGAAGAAGTGTCTGACAGCTAGCAAACTAAGAAC 1250  
1251 CCAAACATTGATACACGGTTCTTCTGGAAAGTCTTGATTGACTCAG 1300  
1301 AGAGCACTATGGTGGTGGTCCAGCACTATGGTGCTCTGTAAATGCCTC 1350  
1351 TTACTGCCTTAAGTCTTCCTCTGTTGCTGACCAGATTGTGTTACCATT 1400  
1401 GAATACACTGACTAATGTTGTTAAACTTTCTGTGGCACCTTGGCCAC 1450  
1451 ATGCCTGCAGGCATTGTTTCAGAACAGTCTCACCAATTACAACACACC 1500  
1501 GTGTTTAGTAGAAGTGTGGTTAGTTGGTGCTTCAGAACTGCTG 1550  
1551 CCTAGGAAACTATAAACCTGGTTAAGGGGAAATCATGGCTTGTCTCT 1600  
1601 TTGTACAGTTACTTATTTATAGGTGTTAAGCTTGTGGACCAGGTGT 1650  
1651 TTTCTTTGGGGCGAACCCCTGAGCAGAGAATCTTACTAGGCTTGGTT 1700  
1701 ATCACAAAACAACCTCCAGTATATACCAAAGCTTGACTTGTGGAGCT 1750  
1751 CTTGAGCTTAGAAGTTGATTGCACTTATTTGGGGGGTGGGAATG 1800  
1801 TACTGCAGTCAGTAAACATTATTGACTGTTAACTTAAACAGATGCTTA 1850  
1851 TGGCACCTGCTCAAGCCGTGACTGTACAGAAGGATCCTGGTTGCTACCA 1900  
1901 GTGGGTGCTGATTGACATCACAAAGTGAATGAAATTGGCTGTGGATCTGT 1950  
1951 TCTTTGTGAAAGAATTCTGATTCTCCATGGAGCATGTACACAACAATT 2000  
2001 TTGATCATATTAACGTACTTCAGTTGCATTATTCAAATGTTATC 2050  
2051 TCTTTTTCTTGAGAAATAACTGTCAGTGACAGCGTTCTTC 2100

2101 TTTATTCTAATAACATGTATAGATCTAAAGCAGGTTGTGTTACATG 2150  
2151 TTTCTACACATTCATCCTTAAAAAGTTGTTGAGAGAGGTTGTATTTAC 2200  
2201 CTTCCCAAGGTTGGAAAGCAGGGGAATTCCCAGTGTCCCTAGTTTCCAC 2250  
2251 CAGAGGAATATGTGTAAGTAGCAAAGTATTCGCTGCTTACATATAGTGTG 2300  
2301 TATGTATGTATATGTAAATTGTGTGTTAAAGAGCTGATACTGATTTTC 2350  
2351 ATATGACAATGTTAGGCAAAGGCCTCCCTGCATTTGAAGAGCAGGTTTC 2400  
2401 ATTTATATGTATTTTGGGATAAAAAAAATAAAATTGTAAATATAGCCCC 2450  
2451 CAAAAAAA 2496

Figure 34

Clone S1+12-2 cDNA sequence (SEQ ID No. 24)

1 CCCACGCGTCCGGCCTCGGAGCAGCCATGATGGAAGGCCTGGACGACGGC 50  
51 CCGGACTTCCTCTCAGAAGAGGGACCGCGGACTTAAAGCAATAATGTAGA 100  
101 TCTTCAAAGTGATGCTGCTCTGCAGGTGGACATTCTGATGCTTTAGTG 150  
151 AGCGGGATAAAAGTAAAATTCACTGTTCACACAAAGAGTCATTGCCAAAT 200  
201 TTTAACAAAACGAGTTTCAGTTGTTGGCAACATGAGGAATTATCTG 250  
251 GCTTCATGATTCCCTTGGTAAAATGAAGACTATGCAGGTTATATCATTG 300  
301 CACCAGCACCAAGACCTGATTTGATGCTCAAGGGAAAAACTACAG 350  
351 AAGCTTGGTAAGGAGAAGGGTCAATGACGAAGGAAGAATTCAAAAGAT 400  
401 GAAACAGGAACTGGAAGCTGAATATTGGCAATATTCAAGAAGACAGTTG 450  
451 CGATGCATGAAGTGTTCCTGTGTCGTGGCAGCACATCCTATTTGAGA 500  
501 AGAGATTTAAATTCCATGTCTTGGAAATATAATCAAGATTGAGTGT 550  
551 GCGAGGAAAAATAAAAAGAGAAACTTGAAGACTTCTTAAAAACATGG 600  
601 TTAAATCAGCAGATGGAGTAATCGTTCAGGAGTAAAGGATGTAGATGAT 650  
651 TTCTTGAGCACGAACGAACATTCTTGGAGTATCATAACCGAGTTAA 700  
701 GGATGCATCTGCTAAATCTGATAGAATGACAAGATCCCACAAAGTGCTG 750  
751 CAGATGATTACAATAGAATTGGTTCTCATTATATGCTTAGGAACCTCAG 800  
801 GATTCTACAGATATATGCAAGTTCTCAAAGTTCAAGACTGTTCGA 850  
851 TAAAACAAGAAAAATAGAAGCACGAGTGTCTGCTGATGAAGACCTCAAAC 900  
901 TTTCTGATCTTTAAAATATTACTTAAGAGAATCTCAAGCTGCTAAGGAT 950  
951 CT CCTGTATCGAAGGTCTAGGTCACTAGTGGATTATGAAAATGCTAATAA 1000

1001 AGCACTGGATAAAGCAAGAGCAAAAAATAAAGATGTTCTACAGGCCGAAA 1050  
1051 CTTCCCAACAATTATGTTGTCAAGAAATTGAAAAATATCTGAGTCTGCA 1100  
1101 AAACAAGAACCTTATAGATTAAAGACAAGAAGAGTTGCTGCATTCAAGAAA 1150  
1151 AAATTTAGTGGAACTGGCAGAGTTAGAACTGAAGCATGCAAAGGGTAATC 1200  
1201 TACAGTTGCTGCAGAACTGCCTGGCAGTGTTAAATGGAGACACATAAGCC 1250  
1251 ACACCTCGCCTTCCTGTTAAAAAGGGCTGCCTTCCTCAAATTATTT 1300  
1301 TGTTTCTTAATGATGTTAACGCATTATGCTCACTGGAAACAAACAAAAA 1350  
1351 GCAGCTGAAAAAGTGCATCAACTCCTCTTTCTGAGAAACATGGAGCAG 1400  
1401 CGCACGCCAGGCGATGCCAGTCTGTGTGCCGTATGCCGCACTGTGTTTC 1450  
1451 CCCATGACAGTGGTCCATCATCGTGCACTCGTCATACTCAGAAGTCCAAA 1500  
1501 GTTCATTCTTAAAGTAGCCTCTATAACTCTGTTATTAAATAAATA 1550  
1551 GTATTCTTATGGCTGCCACTCTTACCTTAAATAATTCTGAAAT 1600  
1601 TTAACCTTCAGAACATGCATTGTTGAAACAAGATAAAAGATTGCCTTTTT 1650  
1651 GAATTTTAAATTGTTAAAGCATATACCACCTTAGTTCAATTCA 1700  
1701 TGTATCCTGGTAAAGCATCTTAATCAGACTTATTTAAATTACTGAATAT 1750  
1751 TTCTTAGACGTTGGGACAGATTATGTAATCTTATAAGTATGATT 1800  
1801 CTGAAGAAAAGCAAATGCATTAGTATGTTGCCTTAAACTGTAGACTAA 1850  
1851 ACCAAGTATTGTAACACAGCGATAACAGTGATAGTTAACTCTA 1900  
1901 TGGTCATTGTATCACTCTGGAAAATGTGGAGTAGCTGTAATAATCTACT 1950  
1951 CCTGTATTATGCTTT 1965

Figure 35

Clone S1+12-5 cDNA sequence (SEQ ID No. 25)

1 GCGGCGCCGAGTCCCGGGAGCGCGGTGGGGCAGCGGGCGCGGGCGGGC 50  
51 GCGGGGACCGCGCCAGCCTGTCACTAATGTCTCCTTGTGTCTCCCCCA 100  
101 TCTCATCCTTTCCCCGGCGCGCCGTGCCCGCCGACCCCACAGGAAGGCC 150  
151 TGGACGACGGCCC GGACTTCCTCTCAGAAGAGGGACCGCGGACTTAAAGCA 200  
201 ATAAATGTAGATCTTCAAAGTGTGCTGCTGCAGGTGGACATTCTGA 250  
251 TGCTCTTAGTGAGCGGGATAAAAGTAAAATTCACTGTTCACACAAAGAGTT 300  
301 CATTGCCAAATTTAAACAAAACGAGTTTCAGTTGTTCGGCAACATGAG 350  
351 GAATTTATCTGGCTTCATGATTCCCTTGTGAAAATGAAGACTATGCAGG 400  
401 TTATATCATTCCACCAGCACCAAGACCTGATTTGATGCTTCAAGGG 450  
451 AAAAACTACAGAACGCTTGGTGAAGGAGAAGGGTCAATGACGAAGGAAGAA 500  
501 TTCACAAAGATGAAACAGGAACGGAACTGGAAGCGGGTTGGATAACAGAGAACCT 550  
551 TGGTTTATTCTACTGCTACCTCCATCCTCTGCATCCTCTTTGTCT 600  
601 TCACTGAATGACTACCCTCACAGAGATCAAACCTCTCCCATCATTGGTCC 650  
651 TGCTGGTTGCTGTGAATATTGGCAATATTCAAGAACAGACAGTTGCGATG 700  
701 CATGAAGTGTTCCTGTGTCGTGGCAGCACATCCTATTGAGAACAGAGA 750  
751 TTTAAATTCATGTCTTGTGAATATAATCAAGATTGAGTGTGCGAG 800  
801 GAAAAAAATAAAAAGAGAAACTTGAAGACTTCTTAAAAACATGGTTAAA 850  
851 TCAGCAGATGGAGTAATCGTTCAAGGAGTAAAGGATGTAGATGATTCTT 900  
901 TGAGCACGAACGAACATTCTTTGGAGTATCATAACCGAGTTAAGGATG 950  
951 CATCTGCTAAATCTGATAGAATGACAAGATCCCACAAAAGTGCTGCAGAT 1000

1001 GATTACAATAGAATTGGTCTTCATTATATGCTTAGGAACTCAGGATTC 1050  
1051 TACAGATATATGCAAGTTCTCAAAGTTCAGAACTGTTCGATAAAA 1100  
1151 CAAGAAAAATAGAACGACGAGTGTCTGCTGATGAAGACCTCAAACCTTCT 1150  
1201 GATCTTTAAAATATTACTTAAGAGAATCTCAAGCTGCTAAGGATCTCCT 1200  
1251 GTATCGAAGGTCTAGGTCACTAGTGGATTATGAAAATGCTAATAAAGCAC 1250  
1301 TGGATAAAGCAAGAGCAAAAAATAAAGATGTTCTACAGGCCGAAACTTCC 1300  
1351 CAACAATTATGTTGTCAGAAATTGAAAAAATATCTGAGTCTGCAAAACA 1350  
1401 AGAACTTATAGATTTAAGACAAGAAGAGTTGCTGCATTCAAGAAAAATT 1400  
1451 TAGTGGAACTGGCAGAGTTAGAACTGAAGCATGCAAAGGGTAATCTACAG 1450  
1501 TTGCTGCAGAACTGCCTGGCAGTGTAAATGGAGACACATAAGCCACACT 1500  
1551 CCGCCTTCCTGTTAAAAGGGCTGCCTCCTCAAATTATTTGTT 1550  
1601 TCTTAATGATGTTAACGCATTATGCTCACTGGAAACAAACAAAAAGCAGC 1600  
1651 TGAAAAAGTGCATCAACTCCTCTTCTGAGAAACATGGAGCAGCGCAC 1650  
1701 GCCCAGGCGATGCCAGTCTGTGTGCCGTGATGCCGCACTGTGTTCCCCAT 1700  
1751 GACAGTGGTCCATCGTGCACTCGTCACTCAGAAGTCCAAGTTCA 1750  
1801 TTCTTCTTAAAGTAGCCTCTATAACTCTGTTATTTATAAATAGTATT 1800  
1851 CCTTATGGCTGCCACTCTTATTTACCTTAAATAATTCTGAAATTAAAC 1850  
1901 CTTTCAGAATGCATTGTTGAAACAAGATAAAGATTGCCCTTTGAATT 1900  
1951 TTTTAAATTTGTTTAAAAGCATATACCACCTTAGTTCAATTGTAT 2000  
2001 CCTGGTAAAGCATCTTAATCAGACTTATTTAATTACTGAATATTCTT 2050  
2151 AGACGTTTGGGACAGATTATGTAATCTTATAAGTATGATTCTGAA 2100  
3001 GAAAAGCAAATGCATTAGTATGTTGCCTTAAACTGTAGACTAAACCAA 2150

3151 GTATTGTAAAATAAACAGCGATAACAGTGATAGTTTAACTCTATGGTC 2200  
3201 ATTGTATCACTCTGGAAAATGTGGAGTAGCTGTAATAATCTAATCCTGT 2250  
3251 ATTATGCTTAAAAAAAAAAAAAAA 2300  
3301 AAAAAAAAAAAAAAAA 3319

Figure 36

clone S1+27 cDNA sequence (SEQ ID No. 26)

1 GTCGACCCACGCGTCCGGCGGCCGTGGGAGGGTCCCGAGGTGGGGTCG 50  
51 GGGCGGGATGGCTGCAGCGCGGCCGGGAGCGGGCCCTGGCGG 100  
101 CCCAGGAGAAGCAGTTCCC GCCGGCGCTGCTGAGTTCTTCATCTAAC 150  
151 CCGCGCTTCGGGCCGCGAAGGACAGGAGGAAAATAAGATTATTAA 200  
201 TCATCCAAATGAGGTAGAAAAGAATGAGAAGATTAGAAATGTCGGATTGT 250  
251 GTGAAGCTATTGTACAGTTACAAGGACATTAGCCCATCAAAACCTGCA 300  
301 AAATCTTACATACACAGAAGAACAGACAGTTCTTCAATGAACCAGAAGA 350  
351 AAATTCTGGATGGTCATGGTGTTCGGAATCCTATAATTGAAAAACAGA 400  
401 GTAAAGATGGAAAACCAGTTATTGAATATCAAGAGGAGGTGTTGGAC 450  
451 AAGGTTTATAGCTCGGTGCTCGGCAGTGCTACAGCATGTACAAGCTTT 500  
501 TAATGGTACATTCTGAAAGCCATGGAAGACGGAGGCGTCAAGCTTCTGA 550  
551 AAGAAAAATTAGAGAAATTCTCCATCGGTATTGCAAACGCTACATTG 600  
601 CAGTCATGTGACCTACTTGACATTTGGTGGAATCAGCTTCTCCGTT 650  
651 GGATAAAATGACTTATTGAAAATCCAGTCCTTATTAATAAGAATGGAG 700  
701 GAAAGCCTGAATATAGTCAAATAACACTGCTTTCTCTATAACGATCAGCT 750  
751 CATCTGGAGTGGATTAGAACAGATGACATGAGAATTATACAAATACC 800  
801 TTACCACCTCCCTTCCAGGCACATCGAACCTGAGTTAGCAGGAAGG 850  
851 GATTCTCCAATAAGAGCAGAAATGCCAGGAAATCTCAACACTATGGAAG 900  
901 ATTTCTTACCGGACCCCTGAAACCTCAATGATCCAGATGCAAATGCAGAT 950  
951 TCCCCAAAATTTGTAAATACAGATGACACTTATGAAGAGCTCCATTAA 1000

1001 ATCGTTATAAGGCCATGAGTGC GGCTGTGCTTATGATCGACGCCTC 1050  
1051 TGTCCACCCAACGTTGGATTGGCTGCAGACTGGACAGCATCGTTGGC 1100  
1101 CCCAGCTCACAGTGCTGGCCTCTGACATCTGTGAACAGTTAACATCAAC 1150  
1151 AAGAGGATGTCGGGTCTGAGAAAGAACCCCAGTTAAGTTATCTACTT 1200  
1201 CAACCACATGAATCTGCCGAGAAGAGCACAGTCACATGAGGAAAACGC 1250  
1251 CCAGCGTGTGCTCACTTCCGTGCACCCGGATTTAATGAAGATTCTCGGT 1300  
1301 GACATCAACAGTGACTTACCAAGAGTGGATGAAGATGAGGAGATCATTGT 1350  
1351 GAAGGCCATGAGTGATTACTGGGTTGGAAAGAAGTCTGATCGCGGG 1400  
1401 AGCTCTATGTTATTTGAATCAAAAAAATGCAAACCTGATTGAAGTAAAT 1450  
1451 GAGGTCAAGAAACTTGTGCAACGCAGTTCAACAACATCTTCTTGGA 1500  
1501 TTGACGGATGACGGCTCACTGAGAGCATATCTAAAAAACACTCTGCAAAC 1550  
1551 ATTTGGTCACATGCAAGTTAGTGGTCAATGACGGACTGCATTCAAGGACA 1600  
1601 AGGGTAAAGCAATACTGCTTGAAGAATCACATTCGACTCGGTCTGCT 1650  
1651 GATCTGAGGTTTTAGATTTAAATATTTATGTGGAATTAATTAAAGGTA 1700  
1701 GTTGGCTATATCGCTATCATTGACATTATGTGAATATTT 1750  
1751 ACTGGAAAATAAGACTAATAAATTGTTAAAGTTTAAAAAAAAAAAAA 1800  
1801 AAAAAAAAAAAAAAAAAAAAAAGGGCGGCC 1834

Figure 37

clone S1+28 cDNA sequence (SEQ ID No. 27)

1 GTTGCGAGTTGATGCTAAGGCCTGCCTCAGAATAAGCCAAGGCCTCTCA 50  
51 CTCAGAAGAAATTGCTCAGAGACGTGAGCGTGCAAGACAAAGGCATGCA 100  
101 GAGAAGCTTGCAGCAGCACAGGGACAGGCACCCTGGAGGCCACCCAAGA 150  
151 TGGGAGTGCCATTGAAACATGTCCAAAAGGAGACGAGCCAAGAGGTGACG 200  
201 AGAACACAGGTGGAAAGTATGACCCCTAAACCTGTGCTCCAGGAAGAAAAC 250  
251 AACCAAGAGTCTTTATTGCATTGCTCGGGTGTTCAGTGGTGTGGCTCG 300  
301 AAGAGGAAAGAAAATTTGTCTGGGCCAAATACAGTCCTCTTGAGT 350  
351 TTTACGAAGGGTACCATTATGCTTCTCAGCTCCACCAGATGGCCTCCCC 400  
401 CAAGTCCCCACATGGCATACTGTGCTCTGGAAAACCTGTATCTTCTGAT 450  
451 GGGAAAGGAACTGGAATATCTAGAGGAGGTACCTCCAGGAAATGTGCTAG 500  
501 GAATAGGAGGCCTTCAAGATTTGTGCTGAAATCTGCAACACTGTGTAGC 550  
551 CTGCCATCCTGCCACCATTATACCACTCAACTTCGAAGCCACTCCTAT 600  
601 TGTGAGAGTTGCTGTTGAACCAAAACATCCAAGTGAATGCCTCAGCTCG 650  
651 TAAAAGGAATGAAACTGTTAACCCAGGCTGATCCCTGTGTCCAGATTTA 700  
701 ATTCAGGAAACGGGAGAGCACGTTTAGTCACAGCAGGAGAAGTCCACCT 750  
751 TCAGCGATGCCTGGATGACTAAAAGAAAGGTTGCAAAGATTCATATCA 800  
801 GTGTATCTGAACCTATTATTCCATTAGAGAAACAATCACAAAACCCCCA 850  
851 AAAGTTGACATGGTCAATGAAGAAATAGGCAAACAGCAAAAGTTGCAGT 900  
901 CATAACCAAATGAAAGAAGATCAAAGCAAATCCCTGAAGGAATCCAAG 950  
951 TTGACTCTGACGGGCTAATCACCATAACAACCTCCAAATAACTGCCACG 1000

1001 CTCAGTGTGAGCCATGCCCTCAGAAGAACATTCTGGA 1050  
1051 AGAAAATAGTGATTGATTGTTCTATGGAGCAGTTGACATCCTCTTGGA 1100  
1101 ATGAGGGTGAAAATACTCACATGATTCATCAGAAGACCCAAGAGAAAATT 1150  
1151 TGGGAATTCAAAGGAAAACTGGAGCAACACCTAACAGGGAGAAGATGGAG 1200  
1201 GAACATTGTTGACCAAATCTGGTCATTGGCCCAAGAAAATGTGGGCCA 1250  
1251 ACATACTAGTCAATAAAAGTGAAGATTTCAGAACTCAGTATGGACAGGT 1300  
1301 CCAGCTGACAAAGCTCAAAAGAAGCCAGTAGATACCGAGATTGGCAA 1350  
1351 TAGCATTGTGAGTGGCTTCCAAGTAGCAACCCTCTGGCCCCATGTGTG 1400  
1401 AGGAGCCTCTCATGGGTGTCGTTCTGGAAAAATGGGACCTAAGT 1450  
1451 AAATTTGAGGAACAAGGAGCAAGTGAATCTGGCAAAAGAGGACAGGAGGAA 1500  
1501 AATGAAACCTGTTGGTGGAAATGAAAACCAAGAGCTACAAGATGGCTG 1550  
1551 CTCTGAGGCCTTGAGAAGAGGACATCACAGAAAGGAGAATCTCCACTCA 1600  
1601 CTGACTGCTATGGACCTTCAGGACAGCTAATTGCCACCATGAAAGAA 1650  
1651 GCATGTCGCTATGCACTGCAAGTGAAACCTCAGCGCCTGATGGCAGCTAT 1700  
1701 GTACACATGTGACATCATGGCCACTGGTGATGTTCTGGTCGAGTCTATG 1750  
1751 CTGTCTTGTCAAAGAGAGAAGGTCGGGTACTTCAAGAAGAAATGAAAGAA 1800  
1801 GGGACAGACATGTTCATCATCAAGGCTGTGCTGCCTGTTGCTGAAAGCTT 1850  
1851 TGGTTTGCTGATGAAATCAGGAAGAGGACAAGTGGCCTGGCCAGCCCAC 1900  
1901 AACTAGTATTGCCATTGGGAGATCATTCCAGTGACCCCTCTGGGTGC 1950  
1951 CAACTACTGAGGAGGAATACTTGCACTTGGGAGAAGGCTGACTCTGAG 2000  
2001 AACCAAGCCCGGAAGTACATGAACGCAGTACGAAAGCGGAAGGGCTTA 2050  
2051 TGTGGAAGAAAAGATTGTGGAGCATGCAGAAAAGCAGAGGACACTCAGCA 2100

2101 AAAATAAGTAGCTACCTACTACTGGTGGATTCTTCCTTATAGTGAATT 2150  
2201 TAAAAGTATCATCAAGGGTTAATATTGGGAAAATTCTTTGCCACAT 2250  
2251 TATCTCTGTTATTCACTTCAATAAAGTTGATCCATATAAATATTTAA 2300  
2301 AGAGGGATGTTAAAAAAAAAAAAAAA 2327